

**What is claimed is:**

1. Process for producing multi-component mineral substance  
5 preparations free of harmful substances comprising the  
following steps:
  - a. Primary thermo-oxidative treatment of organic raw  
materials, of plant or animal origin, in a primary  
10 temperature treatment zone
  - b. Transport of the product of the primary thermo-oxidative  
treatment to a second temperature treatment zone
  - c. Secondary thermo-oxidative treatment of the product of the  
primary thermo-oxidative treatment in a second temperature  
15 treatment zone
2. Process according to claim 1, characterized in that the  
primary oxidation is carried out at a temperature of between  
500°C and 3000°C, preferably between 600°C and 1200°C.  
20
3. Process according to at least one of the previously made  
claims, characterized in that the secondary thermo-oxidative  
treatment is performed at a higher temperature than the  
primary thermo-oxidative treatment, typically at least 10°C,  
25 preferably at least 30°C and especially preferably at least  
50°C above the temperature of the primary thermo-oxidative  
treatment.
4. Process according to at least one of the aforementioned  
30 claims, characterized in that the product of the secondary  
thermo-oxidative treatment is mechanically crushed or ground.
5. Process according to at least one of the aforementioned  
claims, characterized in that as organic raw materials either

of plant or animal origin, plants or parts of plants and/or parts of animals are used, comprising all vegetables and fruit, grasses, nutshells, in particular lemon peels, orange peels, grapefruit peels, grain brans, the remains of olives, wood, stinging nettle, spinach, the remains of sugar beets, and similar.

6. Process according to at least one of the aforementioned claims, characterized in that the secondary thermo-oxidative treatment is carried out continually or quasi-continually.

7. Process according to at least one of the aforementioned claims, characterized in that the secondary thermo-oxidative treatment is carried out using enriched or pure oxygen and/or steam.

8. Process according to at least one of the aforementioned claims, characterized in that the grinding process is carried out under dry and/or wet conditions.

9. Process according to at least one of the aforementioned claims, characterized in that the ground substance is put into a diluted environment and an organic acid is added.

10. Process according to at least one of the aforementioned claims, characterized in that citric acid and/or malic acid and/or lactic acid as well as mixtures of similar acids is added to the ground substance.

11. Use of mineral substance preparations, producible or produced according to at least one of the claims 1 - 8 as a nutritional supplement, food additive, beauty aid, medication, wherein intake can be in particular either in oral, inhalative, intravenous, rectal or topical form.